

ELEVATE



Measurements of vulnerability to human trafficking: Literature review to understand current approaches and identification of further research needs

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1. EXECUTIVE SUMMARY

1.1 Background, objectives, and methodology

Numerous international instruments emphasize that individuals vulnerable to human trafficking need to be better protected (e.g., UN Trafficking Protocol and UNODC Model Law against Trafficking in Persons). Yet, the question that emerges is whether the current substantial body of research provides a solid enough foundation upon which to reliably determine vulnerability of individuals to human trafficking and build effective and evidence-based interventions. Thus, this report focuses on vulnerability to human trafficking and seeks to understand how that vulnerability is being researched, measured, determined, and analyzed.

For the purpose of this literature review, we build on IOM's definition of vulnerability:

"the concept of vulnerability can be understood to mean that some people are more susceptible to harm, relative to others, as a result of exposure to some form of risk. The type of harm to which they are more susceptible varies: it may be psychological, physical, environmental, etc." (IOM, 2019, p.4)

The research questions underlying this review are

- 1. What are the ways in which vulnerability to human trafficking is being researched and measured (e.g., what are the types of measurements and factors to describe and analyze what constitutes vulnerability to human trafficking)?
- 2. Are these approaches useful in determining vulnerability to human trafficking of individuals and groups in society and in informing interventions to protect them?

A systematic literature review was conducted to review current approaches to measuring vulnerability to human trafficking following five key steps: strategy development, literature search, backward chaining, literature screening, and developing inclusions and exclusion criteria. Our review of the literature resulted in a full text review of 21 research papers and reports.

1.2 Summary of literature review results, findings, and recommendations

Our literature review identified 21 relevant studies that applied different methodological approaches to analyze factors of vulnerability to human trafficking. These included:

- 13 qualitative studies that determined vulnerability factors though surveys and/or interviews
- Two quantitative studies that determined vulnerability factors through surveys
- Two qualitative studies that determined vulnerability through the analysis of case files
- Four quantitative studies that determined vulnerability factors through statistical analysis.

Our mapping of vulnerability factors found that:

- Only five studies involved human trafficking victims in their sample populations (of these only three studies focused solely on trafficking victims)
- A majority of the studies (eight out of 21) focused on analyzing the vulnerability of migrants to human trafficking
- 14 studies aimed to identify a comprehensive set of vulnerability factors that could help paint a picture of why individuals are more vulnerable to human trafficking. In contrast, seven studies were concerned with a deeper analysis of select factors, such as gender-based social norms or perception of relative deprivation, and their link to human trafficking vulnerability.
- Individual and community level risk factors were the most explored factors across the 21 studies. In contrast, studies based on statistical analysis had a greater emphasis on structural factors.
- Only one study analyzed protective factors. A few studies pointed out the interplay of risk and protective factors but did not analyze protective factors in sufficient detail to determine their influence on human trafficking vulnerability.
- The most referred to vulnerability factors across the 21 studies include gender / gender equality / gender-based social norms (eight studies), education (seven studies), employment status / employment or income opportunities (seven studies).
- Eleven studies analyzed vulnerability factors related to personal beliefs, aspirations, and a higher level of risk tolerance.

By analyzing the conclusions drawn across the breadth of these studies, we determined that there are a number of key considerations for measuring vulnerability to human trafficking. These may help us gain a more nuanced understanding of factors that influence an individual's vulnerability to human trafficking than the vague notion of vulnerability that often dominates the current discourse:

- The socio-cultural context influences how vulnerability factors play out. Vulnerability factors cannot be taken out of the specific geographical, socio-economic, or community context.
- Choice and autonomy in the decision-making process are critical but hard to capture. It is clear that a person's beliefs and aspirations can influence their level of risk appetite or tolerance. These include their cultural and religious beliefs.
- Vulnerability factors come together in complex constellations. Given the complexity of personal experiences, attitudes and decision-making processes, and how individuals are integrated into their families, communities, societies, and broader socio-economic context, there can be no single cause of vulnerability and no universally valid list of factors.
- Risk does not equal vulnerability and risk factors alone do not equal vulnerability predictors. Vulnerability is a result of both risk and resilience. The complex interplay of various risk and protective factors, such as those that improve capabilities to avoid, cope with or recover from harm, add an additional layer of complexity.

We find that the reviewed studies provide important insights that help build a more nuanced understanding of human trafficking vulnerability and how to operationalize the concept to inform intervention and protection programs. We argue though, that each study by itself does not provide a complete picture of the story and is thus less useful in determining vulnerable individuals and informing effective interventions. Major gaps in research that also undermine the usefulness of reviewed studies include:

- Lack of research on protective factors. There is a lack of research on factors that can improve capabilities to avoid human trafficking. Given that risks factors are difficult to overcome (especially structural factors such as respect of human rights and the rule of law), tackling trafficking may be more productive if we could better understand ways in which individuals and communities make risk informed decisions and be better protected.
- Little consideration of the role of traffickers and the demand for forced labor. In the absence of traffickers there will be no trafficking. Yet, from the research in this review, we are unable to determine the balance between trafficking linked to organized crime and trafficking that is more opportunistic. Nor are we able to design interventions to stop traffickers if we have limited understanding of how they operate. There is also the question of demand for forced labor and trafficked persons, which is not touched upon in these papers. However, we note that a search with different search terms may produce more specific papers that could help to answer these questions.
- Need for evidence-based empirical research complemented with structural level analysis. We identified four approaches to determining factors that influence an individual's vulnerability to human trafficking (i.e., qualitative survey-based studies, quantitative survey-based studies, qualitative studies based on review of case files, quantitative studies based on statistical analysis). Each approach comes with its own advantages and limitations. To overcome shortcomings of the different measurement approaches, there is a need for a combination of methodological approaches with more studies being replicated in different contexts. In addition, these four methodologies seem to mainly be carried out in isolation, rather than building upon each other in steps or phases, which might strengthen study findings.
- Need for evaluating validity and effectiveness. Existing research into vulnerability factors and measurements provides too little guidance on the appropriate choice of policies to reduce or remove vulnerability. It is unclear how much the results of these studies are "ground truthed" as none of the papers reviewed discussed testing their theories in real life situations. It is also unclear how much the results and theories discussed are shared with other non-academic players in the ecosystem. Inevitably, more research into the efficacy of measurements and links to policies and interventions will be needed.
- Lack of critical discussion of dominant vulnerability narratives. When we consider how the term "vulnerability" is used, it is clear that the assumed understandings often conceal a variety of uses with multiple conceptual dimensions. (Brown et al., 2017). Indeed, the use of the concept of vulnerability is often linked to different social, political, economic and cultural conditions and associated with an undefined standard of behavior, situation or way of life. Thus, the concept of vulnerability is very variable, has both situational and spatial elements and includes recognized or unrecognized assumptions of what characterizes vulnerability

and the root causes of vulnerability. Rather than having one measure of vulnerability we may need to think about the forms and situations in which the term is used. It is also important to recognize that in the short-term vulnerability is difficult to change. For example, poverty, structural factors, inequalities and gender norms will not be overcome quickly. This begs the question, as to whether vulnerability is it the right focus for interventions? As discussed above, vulnerability is a mix of risk and resilience, and it stands to reason that interventions should also address both.

In answering the second of our research questions, we have several recommendations for the use of existing research in informing interventions to protect vulnerable individuals and groups. These recommendations are:

Recommendation 1: The complex interplay of vulnerability factors must be accounted for when using research to design interventions

Using the existing research and measures to inform interventions will only be useful in the specific context of the research. An attempt to categorize individuals into groups that meet similar vulnerabilities disregards the lived experiences, personal beliefs and aspirations that influence the individual decision-making process and may fail to identify potential victims or misallocate resources into ill-informed interventions. It is also important to note, that the complexity of an individual's vulnerability cannot be captured in its entirety in measurement approaches that seek to determine vulnerability factors applicable to a group of individuals. Limitations of vulnerability measurements need to be accepted and accounted for when informing interventions.

Recommendation 2: Research must merge risk and protective factors to better inform interventions There is a need to not only mitigate vulnerabilities but also strengthen protective factors. More research into these protective factors is needed so as to design interventions and tools that are able to overcome vulnerability and reduce the likelihood of trafficking.

Recommendation 3: Research must not ignore the topic of autonomy and influence of traffickers

To better inform interventions, more research must acknowledge the influence that one's individual autonomy, as well as the presence or absence of traffickers will have on how vulnerable an individual becomes.

Recommendation 4: Promote mixed method approaches with validated results

To overcome shortcomings of the different measurement approaches, there is a need for a combination of methodological approaches. There is also a need to evaluate the effectiveness of interventions and the strength of the underlying program theory by testing theories on the ground and evaluating their truthfulness in real life communities. In addition, it would be relevant to explore if cultural, community level knowledge is more effective at identifying vulnerable individuals and how to protect them.

Recommendation 5: Develop guiding principles for vulnerability measurements

Judgment on what makes someone vulnerable can be clouded due to ingrained biases and assumptions of researchers and those implementing interventions. Developing standardized guiding principles for vulnerability measurements that consolidate findings from relevant quality research will help ensure that global learnings are captured and applied and that future vulnerability measurements are informed by academically sound methods and best practices.

Recommendation 6: Create a collaborative database of relevant research on vulnerability, accessible to practitioners

There is a need for a more cohesive, collaborative ecosystem, both for research and for interventions, where different players work on different levels simultaneously to tackle the complex challenge of vulnerability to trafficking more effectively. Our recommendation is to identify and collate quality research on vulnerability and create an ecosystem for researchers and practitioners at different levels to share and collaborate.



2. INTRODUCTION

2.1 Background and purpose of this report

According to United States Agency for International Development (USAID) human trafficking is "a crime that uses force, fraud, or coercion for the purpose of exploiting an individual for profit through forced labor or sexual exploitation" (USAID, 2021). Despite the recognition of human trafficking as a devastating social injustice and an international crime and the vast numbers of interventions being implemented all over the world, the practice continues across and within borders globally.

Whereas there are regular, real success stories in the fight against human trafficking at the micro level, as a whole, the current interventions seem to be failing to make real, lasting headway into reducing and preventing the practice of human trafficking. This becomes evident from the annually increasing number of trafficking convictions as reported by the United Nations Office on Drugs and Crime (see for example UNODC, 2020a) and USAID (see for example, USAID, 2020). Notably, these official statistics only provide a glimpse of the actual size of the crime. Further, the COVID-19 pandemic has exacerbated the situation with the UNODC (2020a) pointing out that "victims are targeted when they are vulnerable, and the COVID-19 economic recession will result in more people at risk of trafficking".

This literature review is based on the argument that vulnerability as a concept is currently considered critical in shaping the ways in which we determine individuals at risk of trafficking, inform and justify interventions, and allocate resources to most effective means.

As an example, the UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against Transnational Organised Crime (also known as the Palermo Protocol or UN Trafficking Protocol) calls out on governments to "take or strengthen measures, including through bilateral or multilateral cooperation, to alleviate the factors that make persons, especially women and children, vul-

nerable to trafficking, such as poverty, underdevelopment and lack of equal opportunity". The UNODC Guidance Note on Article 3 of the UN Trafficking Protocol states that "Establishing the existence of victim vulnerability will be important for many aspects of a trafficking case. For example, vulnerability can be a critical indicator when identifying victims; and accurate assessment of vulnerability can help to ensure that victim witnesses are appropriately supported and protected." (UNODC, 2012).

While vulnerability is assigned critical importance in fighting human trafficking, key international instruments, including the UN Trafficking Protocol, do not provide a clear definition of human trafficking vulnerability. They also often relate vulnerabilities with broad systemic problems, such as poverty, instability of the local economy, and inequality, or ill-defined factors such as gender and age. Examples of how the term is being used (but not clearly defined) in these instruments are provided in Table 1 below. Also, the recently released ILO glossary of terms, "The Work in Freedom Handbook" does not include definitions for the terms "vulnerability" or "vulnerability to trafficking".

Key international instruments stipulating the adoption of measures to prevent human trafficking are thus based on a very limited discussion of what constitutes vulnerability to human trafficking. The absence of accurate definitions and evidence-based methods to determine vulnerability to human trafficking can lead to interventions being based on vulnerability assumptions and biases. As a consequence, this can result in protection gaps and unmet needs.

Given the importance that vulnerability is assigned to finding solutions, this study evaluates if the current body of research provides a solid enough foundation upon which to determine human trafficking vulnerability and inform effective and evidence-based interventions to protect at risk individuals and groups in society. Thus, this paper takes a critical look at the ways in which vulnerabilities to trafficking are being determined, analyzed, and reported.

Table 1: Use of the term "vulnerability" in key international instruments

International instrument	Use of term 'vulnerability'
UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against Transnational Organised Crime (also known as the Palermo Protocol or UN Trafficking Protocol)	The Protocol calls out on governments to "take or strengthen measures, including through bilateral or multilateral cooperation, to alleviate the factors that make persons, especially women and children, vulnerable to trafficking, such as poverty, underdevelopment and lack of equal opportunity" (United Nations, 2000).
The UNODC Guidance Note on Article 3 of the UN Trafficking Protocol	The Guidance Notes states that "Establishing the existence of victim vulner- ability will be important for many aspects of a trafficking case. For example, vulnerability can be a critical indicator when identifying victims; and accurate assessment of vulnerability can help to ensure that victim witnesses are appro- priately supported and protected." (UNODC, 2012).
EU Anti-Trafficking Directive 2011/36/EU	The Directive refers to particularly vulnerable victims, such as children and women, and calls for specific assistance and protection programs for them without further clarifying what vulnerability entails (European Commission, 2011).
UNODC Model Law against Trafficking in Per- sons (UNODC, 2009)	The Model Law describes "a position of vulnerability" to be based on an individual's belief to have "no real and acceptable alternative but to submit" and offers several factors as leading to a position of vulnerability. These factors, include, entering a country illegally or without proper documentation, any physical or mental disease or disability (e.g. substance addiction), reduced capacity to form judgements (by virtue of being a child, illness, infirmity or a physical or mental disability), promises or giving sums of money or other advantages to those having authority over a person, or being in a precarious situation from the standpoint of social survival (UNODC, 2009).
ILO Protocol of 2014 to the Forced Labour Convention, 1930,	The Protocol sets out measures to be taken for the prevention of forced or compulsory labor which should include, among others, "educating and informing people, especially those considered to be particularly vulnerable, in order to prevent their becoming victims of forced or compulsory labour" (ILO, 2014).

2.2 Definitions

According to the UN Trafficking Protocol (United Nations, 2000), human trafficking is defined in Article 3a as:

"[...] recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or service, slavery or practices similar to slavery, servitude or the removal of organ."

The UN Trafficking Protocol (United Nations, 2000) outlines three clear elements that define trafficking: the act, means and purpose.

- The act is described as "recruitment, transportation, transfer, harboring or receipt of persons".
- The means refer to how the act of trafficking gets done and is described as "the threat or use of force or other forms of coercion, of abduction, of fraud, of deception".
- The purpose is the reason for the act, which in the case of trafficking is exploitation.

Further, the protocol (United Nations, 2000) specifies in Article 3c that if any of the means listed in Article 3a have been used, the consent of the person is of no relevance, and further, that if the person is a child (i.e., under 18 years of age), exploitation, as described above, is trafficking, regardless of whether any of the means have been used.

Human trafficking can occur in many variations. The most common forms of exploitation in trafficking referred to in the UNODC 2020 Global Report on Trafficking in Persons (UNODC, 2020a) include

- Forced labor: including child labor and involuntary domestic servitude
- Sexual exploitation
- Criminal activity
- Begging
- Forced marriage
- Mixed forms
- Baby selling
- Removal of organs

Our literature review focuses on studies that examine vulnerability to human trafficking in general and studies particularly concerned with forced labor.

Given the lack of a clear definition of human trafficking vulnerability we are referring to the definition of migrant vulnerability to exploitation and violence as provided by the International Organization for Migration (IOM). While it is not concerned with vulnerability to human trafficking, it provides a clear clarification of what constitutes vulnerability and is broad enough to be adopted for the purposes of this report. IOM states

"The concept of vulnerability can be understood to mean that some people are more susceptible to harm, relative to others, as a result of exposure to some form of risk. The type of harm to which they are more susceptible varies, it may be psychological, physical, environmental, etc." (IOM, 2019)

For the purpose of this literature review, we build on IOM's definition of vulnerability (see IOM, 2019) and understand vulnerability to human trafficking to mean that some individuals are more susceptible to human trafficking as a result of exposure to some form of risk.





3. METHODOLOGY

3.1 Research design

The process of designing the methodology for this review began by recognizing that most human trafficking interventions lack a thorough analysis of factors that determine an individual's vulnerability to human trafficking. The review is based on the assumption that a clear understanding of what drives vulnerability to human trafficking is essential in developing effective human trafficking interventions.

The research questions underlying this review are thus

- What are the ways in which vulnerability to human trafficking is being researched and measured (e.g., what are the types of measurement and factors to describe and analyze what constitutes vulnerability to human trafficking)?
- Are these approaches useful in determining vulnerability to human trafficking of individuals and groups in society and in informing interventions to protect them?

In this context, by "measure", we mean determine assess, analyze, and/or calculate. A systematic literature review was conducted to review current approaches to measuring vulnerability to human trafficking. The objective of the review is to take a critical look at the ways in which factors driving vulnerability to trafficking are being determined, identified, and analyzed. To map the results of the literature review, a mapping framework was developed that draws on IOM's Determinants of Migrant Vulnerability (DoMV) model.

3.2 Literature review process

The review process was developed to capture recent studies and findings, and the relevant literature upon which those studies were designed.

Preliminary review

The original focus of the research centered on database searches on human trafficking to three key industries (construction, poultry and tourism) in Cambodia and Thailand. Searches for related terms produced extremely limited results. For example, searching for "human trafficking" and "vulnerability" and "agriculture" or "poultry" or "hospitality" or "construction" returned only one potentially relevant paper. Searching for "human trafficking" on the other hand returned almost 12,700 results. The preliminary review led to the reshaping of our research strategy.

Strategy development

Based on the output from the preliminary review we refocused the literature review on studies that determined and analyzed factors leading to human trafficking vulnerabilities, omitting the specific industry sectors and geographic focus. It was also decided that searches should exclude sex trafficking as previous studies have concluded that literature on sex trafficking dominated the field of human trafficking (Sweileh, 2018), and we intended to draw out vulnerability factors for trafficking into work that is not commonly criminalized, in line with our original concept. As human trafficking literature often produces findings based on case studies or small sample sizes, the omission of a geographic focus was intended to capture instances where studies are replicated in different locations which could shed a light on how studies are used to find human trafficking interventions that work. Through trial searches we determined that optimal searches would involve more than one term and would focus on a specified time period to narrow the focus of the returned results, while backward chaining could be used to explore peer reviewed papers from before a chosen time period. For example, limiting the search for "human trafficking" to studies from the past 5 years (2016-2021) reduced this figure to around 4,700 results. Adding a second search term, for example, "factor", focused the results significantly and in this example returned twenty-nine studies. Based on this approach we developed research strings (Appendix I) using terms related to the measurement of vulnerability to human trafficking.

Literature search

Relevant literature was located through searches of one academic library database (University of Hong Kong) which provided access to most academic journals. This first search phase returned 174 studies. We then conducted a second search phase for the same period (2016-2021) on Google Scholar and Google that focused specifically on human trafficking assessment, measurement and vulnerability. It was noted that fewer potentially relevant papers were being returned after the fifth page of results (50 results total per search string) and therefore the fifth page was determined to be the cutoff point for each search string. The second search phase added additional papers to the initial cache.

Backward chaining

A third and final search phase of the search involved backward chaining¹ when relevant studies mentioned literature of interest. This expanded the scope of our research to include results predating 2016. Several papers referenced studies by the United Nations International Organization for Migration, therefore we also reviewed its online publications platform.

Literature screening

The initial screening was conducted by skim reading article abstracts. This reduced the number of potentially relevant articles which were uploaded to Mendeley Reference Manager for further review.

Inclusion and exclusion criteria:

In the final screening we implemented our predefined inclusion/exclusion criteria. We excluded papers which were not peer reviewed or published by an internationally acknowledged expert organization. We also omitted any studies that only identified vulnerability factors based on literature review. Our final list of studies of interest included only those that determined vulnerability factors through empirical research (i.e. surveys or interviews) or statistical analysis.

Figure 1. Results from phased approach to reviewing academic and grey literature

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¹ Backward chaining is the process by which one uses a good information source, such as an article relevant to one's topic, and mine its citations for additional useful resources.

3.3 Limitations

Cultural bias: The literature review focused on English language literature, meaning that studies in other languages were not reviewed, potentially resulting in a strong bias toward Western perceptions of vulnerability to human trafficking.

Temporal limitation: The focus on literature published in the past 5 years (2016-2021), introduced as a measure by which to ensure this report is reflective of contemporary research, may also have resulted in the exclusion of relevant material from outside this period. To address this issue, backward chaining was used to look back through relevant literature referenced in the literature identified within the 5-year window of focus. Relevant studies not referenced in the final set of articles will have been excluded.

Research string limitations: The exclusion of literature that contains the term "sex" in its title will have resulted in the omission of methods to identify vulnerability to sex trafficking which may be relevant to trafficking for other reasons and which may have provided a more complete picture of all potential risk factors. The authors recognize that this exclusion could have reduced the total pool of studies from which we searched by up to 30 percent (Sweileh, 2018). It is worth noting that included within this report are findings from a study on the effect of disasters on internal trafficking risk including for prostitution (Gurung and Clark, 2018). A key finding from this study is that risk factors are not the same across different types of trafficking. Risk factor applicability for different types of trafficking is an area that could be further explored in future research based on the findings of this report.

Finally, our research strings did not explicitly incorporate the term 'migration' whose inclusion may have provided the authors with additional studies of vulnerability to trafficking within the context of migration. To focus exclusively on trafficking while avoiding literature that conflates push factors to migration and trafficking risk, we chose to make the omission.



4. MAPPING OF LITERATURE REVIEW RESULTS

4.1 Mapping framework based on IOM's Determinants of Migrant Vulnerability model

In designing the framework to map out the results of the literature review, we drew on IOM's Determinants of Migrant Vulnerability (DoMV) model (IOM, 2019). The model provides the most recent comprehensive exploration of vulnerability albeit with a focus on migrants vulnerable to violence, exploitation, or abuse. It looks beyond the risk of trafficking and was specifically developed to identify, protect, and assist migrants who have experienced or are vulnerable to violence, exploitation, and abuse before, during or after migrating, and to guide the development

and implementation of interventions to reduce such vulnerability (IOM, 2019).

Although developed for a different context, important insights can be drawn from the model and applied to the purpose of this paper:

- **Risk and protective factors:** The model encompasses not only vulnerability but also protection considerations. It therefore considers both risk factors (which contribute to vulnerability) and protective factors (which improve capabilities to avoid, cope with or recover from harm), and the way that the two interact. IOM finds some factors can be risk factors or protective factors depending on the context. As an example, IOM explains that being a member of a particular racialized group may be a protective factor in some contexts (if that group is dominant or privileged), but a risk factor in others (if that group is marginalized or oppressed).
- **Different levels of vulnerability factors:** The model recognizes that migrants and the households/families, communities, and groups to which they belong are all situated in a broader social environment. It thus considers risk and protective factors at different levels i.e., individual, household/family, community and structural. See Table 1 for explanation of the different levels used in the IOM model.
- **Complex interaction of risk and protective factors:** In the IOM model, the overall vulnerability of individual migrants, is understood as the result of the interaction of multiple risk and protective factors at different levels. This means that no one factor will lead to a specific outcome. It also means that the presence of one or more risk factors does not necessarily result in a migrant being vulnerable, as the protective factors may mitigate the risk factors. It is an overall preponderance of risk factors, coupled with inadequate protective factors, that results in vulnerability.

We decided to create a mapping framework based on IOM's DoMV model as the model reflects and integrates several key considerations put forward by studies on human trafficking vulnerability identified in our research. As an example, several of the reviewed studies argue for a holistic framework that takes into account the lived experiences of individuals as well as structural macro-level factors. Some studies analyze risk as well as protective factors, and some studies argue for a more nuanced understanding of trafficking vulnerabilities and the complex interaction of vulnerability factors.

In mapping the results of our literature review we considered key elements of IOM's DoMV model and added other aspects that provide further details on the methodological approach of the identified studies. Thus, the list of mapping categories include:

- A. Scope of studies reviewed
 - Methodology
 - Geography
 - Group in society focused on, e.g. children, women, migrants
 - Survey sample i.e., number of individuals surveyed (for survey-based studies only)
 - Survey-based studies were also categorized into those that were designed to specifically involve human trafficking victims in surveys or interviews and those that focused on a different target group (e.g., service providers, community living in a certain location which might or might not include victims)
- B. Themes explored in studies reviewed (themes were drawn from IOM DoMV model)
 - Scope of factors analyzed including risk and/or protective factors and multiple or select factors (i.e., studies that aimed to prove the validity of a singular or very few vulnerability factors only)
 - Category drawn from IOM model: Factor level i.e., individual, household, community, and/or structural

Table 2 below provides an explanation of the different levels of vulnerability factors considered in the IOM DoMV model. In mapping out the results of this literature review (see section 4.2) we are adopting these factor levels.

Table 2: Explanation of levels used in IOM DoMV model (based on IOM, 2019)

Factor level	Explanation	Examples of factors
Individual factors	 These are related to individuals i.e., their status in society; their physical and biological characteristics; their histories and experiences; their beliefs and attitudes; their individual emotional, psychological and cognitive characteristics; and their physical and mental health and well-being. Individual characteristics are a central element of vulnerability and resilience, as they mediate how individuals respond to household/family, community and structural contexts. All individuals are rights holders, and the extent to which an individuals' rights are respected will affect how individuals ual factors impact vulnerability or resilience. 	 Age Sex Racial and/or ethnic identity Sexual orientation Gender identity Personal history Mental and emotional health Access to resources such as money, goods or support.
Household and family factors	 These are related to the family circumstances of individuals and their family members, the role and position of individuals within the family, and family histories and experiences. Families are important in determining vulnerabilities, as they are typically the first option for individuals who require support, particularly children and young people. All members of the household and family are rights holders, and the extent to which their rights are respected will affect how family and household factors impact vulnerability or resilience. 	 Family size Household structure Socioeconomic status Migration histories Employment Livelihoods Education levels Gender discrimination Family dynamics
Community factors	 Individuals and their families are situated within a broader physical and social community context. They are affected by their community's economic, cultural and social structures, and their positions within these structures. Communities with strong social networks and access to resources can provide support and protection to individuals and families, whereas communities without such networks and resources can create risk factors for individuals and families. All members of a community are rights holders, and the extent to which their rights are respected will affect how community factors impact vulnerability or resilience. 	 Availability of quality educational opportunities, health care and social services Equal access to resources Livelihood and income-generating opportunities The natural environment Social norms and behaviors.
Structural factors	 Include political, economic, social and environmental conditions and institutions at national, regional and international levels that influence the overall environment in which individuals, families and communities are situated and which shape their beliefs, decisions and behaviors. They are typically relatively stable and have both immediate and longer-term impacts 	 Histories of colonization and conflict Political systems Migration policies and governance Respect for human rights The rule of law Bribery, corruption and degree of tolerance of criminality

4.2 Mapping of literature review results

This section maps out and categorizes the relevant studies identified through the literature research. A total of 21 relevant studies were identified which applied the following methodologies to analyze factors of vulnerability to human trafficking:

A. 13 qualitative studies that determined vulnerability factors through surveys and/or interviews (see Table 3)

Of these only one study analyzed risk and protective factors. Of the other 12 studies, six studies analyzed multiple risk factors and six studies focused on select risk factors (e.g., gender norms or lack of parental presence). Only six studies designed their surveys to include human trafficking victims, of which three studies focused on multiple risk factors and two focused on a select risk factor (i.e. implementation of return program and gender norms). Of the 13 qualitative studies

- ten studies focused on a single country,
- two studies focused on two countries, and
- one study focused on four countries.

The surveys conducted for these studies all had a small sample size ranging from 16 in the smallest to 719 in the largest. Interviewees ranged from human trafficking victims, their families and communities, service providers, NGOs and/or other expert organizations, and/or simply people living in a certain geographical location (e.g., village with high percentage of migrant workers). Only six studies were designed explicitly to capture the experiences of trafficking victims. In most cases, these studies applied a mixed method approach which involved interviews, focus group discussions, field observations, and literature review.

B. Two quantitative studies that determined vulnerability factors through surveys (see Table 4).

Both studies focus on migrants and are concerned with overlapping geographical areas that include Mediterranean migration routes from non-EU countries to Greece and/or Italy.

Both studies draw insights from surveys conducted using IOM's Displacement Tracking Matrix Flow Monitoring Surveys with valid responses from 16,524 and approximately 12,000 individuals respectively. Flow monitoring surveys are designed to capture the demographic and socioeconomic profiles of respondents, information on migration journeys, challenges, and respondents' needs. The surveys are structured interviews that are conducted with individual respondents at flow monitoring points, which are set up in places of entry, transit or exit in each survey country (Bartolini and Zakoska-Todorovska, 2020).

C. Two qualitative studies that determined vulnerability factors through the analysis of case files (see Table 5).

One study (Brunovskis and Surtees, 2017) aimed to determine human trafficking risk factors for migrants and refugees from Serbia. The analysis is based on 32 case files compiled by frontline NGO staff working with and assisting the migrant/refugee population in Serbia. Case files included but were not limited to those of human trafficking victims. The review of case files was complemented with discussions with NGO staff over a period of several months about both successes and challenges in the identification and assistance of human trafficking cases in the context of their frontline work.

The other study (UNODC, 2020b) analyzed 489 court cases collected by UNODC for the purpose of the 2020 Global Trafficking in Persons report. The court cases narratives were compiled and provided by UN Member States and covered various forms of exploitation across numerous countries. The analysis focused on socio-economic determinants of trafficking and identified pre-existing factors that traffickers have taken advantage of.

D. Four quantitative studies determined vulnerability factors through statistical analysis (see Table 6).

All four studies aimed to determine globally relevant vulnerability factors. Due to data limitations extrapolation has been used in these studies.

One of these studies specifically focused on analyzing the link between natural disasters and internal trafficking. Three studies aimed to determine a more comprehensive set of factors contributing to human trafficking at a global scale (i.e., without a specific context focus). For their analysis, these studies worked with a pre-defined list of potential factors that was drawn from academic research, expert consultations, and statistical data from governmental or inter-governmental databases. One study drew vulnerability factors explicitly from empirical studies. Statistical/mathematical models were then applied to test the strength of the pre-defined vulnerability factors.

Two of the four quantitative studies set out to analyze the human trafficking flow between origin and destination countries and thus focused on identifying push factors that lead to trafficking from a (origin) country and pull factors that draw trafficking to a (destination) country. We included the pull factors in our consideration of risk factors.

The statistical models applied include regression models, generalized estimation equations and statistical testing of each factor's relationship to the prevalence of modern slavery. These methodologies are further explained in Table 7.

Focus group	Geography	Study	Scope of fac- tors analyzed	Factor level	Sampling size	Intentional involvement of victims
Human trafficking victims (2)	Albania, Viet- nam, Nigeria, UK (1)	Hynes et al. (2018)	Multiple risk factors	Individual, household, community, structural	96 key infor- mants and 68 human traffick- ing victims	Yes
	Indonesia (1)	Kleden and Atti (2019)	Multiple risk factors	Individual, household, community	49	Yes
Migrants (1)	U.S. (1)	Deckert, Warren, and Britton (2018)	Multiple risk factors	Individual, community	16	No
Returnee migrant workers (3)	Ethiopia (2)	Busza et al. (2017)	Protective factors	Individual, community	In-depth interviews with 12 women and focus group discussions with 23 wom- en	No
		IOM (2021b)	Select risk factors (i.e., gender norms and stigma)	Household, community	67	Yes
	Indonesia (1)	IOM (2021a)	Select risk factors (i.e., gender norms and stigma)	Household, community, structural	48	No

Table 3: List of qualitative survey-based studies (the number in parentheses indicates the total number of studies within the specified category)

Focus group	Geography	Study	Scope of fac- tors analyzed	Factor level	Sampling size	Intentional involvement of victims
Rejected asylum seekers and irregu- lar migrants (1)	Nigeria and Norway (1)	Pasche et al. (2018)	Select risk factor (i.e., im- plementation of return program)	Structural	60	Yes
Children (2)	Nepal (1)	Adhikari and Turton (2020)	Multiple risk factors	Individual, community	60	No
	Romania (1)	Pascoal and Schwartz (2018)	Select risk factors (e.g., lack of parental presence)	Individual, household	21	No
Stateless hill tribe people (1)	Thailand (1)	Rijken et al. (2015)	Select risk factor (i.e., statelessness)	Individual, structural	30	No
People residing in a specific district, village, or commu- nity (2)	Ethiopia, Saudi Arabia (1)	Kiros and Zeru (2020)	Multiple risk factors	Individual, household, community, structural	41	Yes
	Nepal (1)	Mo (2017)	Select risk factors (i.e., perceptions of relative depri- vation)	Individual	719	No
Individuals within the social welfare system (1)	U.S. (1)	Schwartz et al. (2019)	Multiple risk factors	Community	42	No

Table 4: List of quantitative survey-based studies (the number in parentheses indicates the total number of studies within the specified category)

Focus group	Geography	Study	Scope of fac- tors analyzed	Factor level	Sampling size	Intentional involvement of victims
Migrants ages 14 years or older (2)	Mediterranean migration route to Italy (1)	Bartolini and Za- koska-Todorovska (2020)	Multiple risk factors	Individual, community	12,000	No
	Central and Eastern Med- iterranean migration route to Italy and Greece (1)	Galos et al. (2017)	Multiple risk factors	Individual, community	16,524	No

Table 5: List of qualitative studies based on review of case files (the number in parentheses indicates the total number of studies within the specified category)

Focus group	Geography	Study	Scope of fac- tors analyzed	Factor level	Sampling size	Intentional involvement of victims
Human trafficking victims (1)	Global	UNODC (2020b)	Multiple risk factors	Individual, household/ family	489 court cases	Yes

Migrants, refugees	Serbia	Brunovskis and	Multiple risk	Individual,	32	Yes
(1)		Surtees (2017)	factors	structural		

Table 6: List of studies based on statistical analysis (the number in parentheses indicates the total number of studies within the specified catego-	
ry)	

Focus group	Geography	Study	Scope of fac- tors analyzed	Factor level	Sampling size	Intentional involvement of victims
No specific group (3)	Global (3)	Walk Free Foundation (2018) The Global Slavery Index 2018	23 risk factors	Individual, community, structural	167 countries	No
		Bales (2011)	76 push and pull factors	Structural	All countries worldwide	No
		Cho (2015)	Push and pull factors	Community, structural	153 countries	No
Disaster affected populations (1)	Global	Gurung and Clark (2018)	Select risk factor (i.e., influence of disaster sever- ity on internal trafficking)	Structural	158 countries	No

Table 7: Details on the methodology applied in statistical analysis - based studies

Study	Methodology
Walk Free Foun- dation (2018) The Global Slav- ery Index 2018	The 2018 Global Slavery Index includes an assessment of vulnerability that is used to measure the fac- tors linked to the risk of modern slavery in each country. The vulnerability model of the Global Slavery Index is guided by human security and crime prevention theories.
	The factors that comprise the vulnerability component of the index are iterative and selected by mem- bers of a research team from available data sources including pre-existing research by academia and intergovernmental bodies such as the World Bank.
	Data resources were selected from as close to source as possible (instead of composite indices), com- monly using academic and intergovernmental data sets upon which estimations were made for countries with missing data.
	The data was standardized, normalized and reviewed by an Expert Working Group. An initial list of 35 in- dicators underwent collinearity testing, and weaker variables were removed. The variables were grouped into 5 dimensions. Factor loadings were applied by statistical analysis.
Cho (2015)	The study drew a list of 70 (potential) push factors in countries of origin, and 63 (potential) pull factors in countries of destination from 19 empirical studies identified through literature review.
	To check the statistical significance of the effect of a factor, the author performed an extreme bound analysis, running more than two million regressions with all possible combinations of variables for up to 153 countries during the period of 1995–2010.
	In performing the extreme bound analysis, the author uses three different human trafficking datasets. The UNODC, 2006, Global Report on Trafficking in Persons is used as the main measurement. Used for robustness check were the United States Department of State (2001–2014) Trafficking in Persons Report and the ILO, 2005, Database in Global Reports.
Bales (2011)	The study built a list of 76 factors (referred to as human trafficking predictors) that were primarily sourced from the UN statistical handbook (other sources included World Statistics Pocketbook, United Nations, Sales No. E.95.XVII.7. New York: United Nations, 1995; The International Corruption Index assembled by Transparency International; 'Human Rights Abuses by Country' a table compiled by the Observer Newspaper, London, 25 October, 1999; Amnesty International, Amnesty International Report 1999, London, 2000; and the author's own database of slavery and trafficking).
	Factors were categorized into push factors and pull factors and reviewed by trafficking experts.
	To examine the relative strength of each of the factors the author applied a multiple regression model which allows to examine a number of factors at the same time and calculates the independent effect of each of these factors on the dependent variable, which in this case is the amount of trafficking from a country and to a country.
Gurung and Clark (2018)	Focuses on the impact of natural disasters on internal trafficking in 158 countries from 2001 to 2011. The authors apply generalized estimation equations with country-year as the unit of analysis: Internal trafficking = $\mathbf{a} + \mathbf{\beta}1$ (Affected population) + controls + $\mathbf{\epsilon}$
	Four dependent variables were applied, which capture the presence of four types of internal trafficking in country-year, i.e., forced prostitution, forced labor, child prostitution, and child labor. The outcome variables are coded "1" for the country witnessing internal trafficking in a given year, and "0" otherwise. The variables were obtained from Richard Frank's Human Trafficking Indicators (HTI) dataset which is compiled from the US State Department's annual TIP report. Affected population, the explanatory vari- able, was obtained from the Emergency Events Database (EM-DAT) of the Center for Research on the Epidemiology of Disasters.
	The authors relied on past and recent trafficking-based scholarship to identify pertinent control variables for their analysis and also introduce two variables to gauge government action against trafficking, i.e., trafficking legislation and trafficking enforcement.

4.3 Mapping of vulnerability factors identified in the literature review

Table 8 below lists the scope and type of vulnerability factors explored in the 21 studies identified through the literature review. Studies differed not only in terms of the measurement approach applied but also with regards to the scope and depth of analysis.

A majority of the studies (eight out of 21) focused on analyzing human trafficking risks of migrants.

Fourteen studies aimed to identify a comprehensive set of vulnerability factors that could help paint a (as much as possible) complete picture of why individuals are more vulnerable to human trafficking compared to others. In contrast, seven studies were concerned with analyzing the validity of a singular or a few select factors, such as gender-based social norms or perception of relative deprivation and their link to human trafficking vulnerability. These studies provided more differentiated insights into why and how certain factors lead to greater vulnerability. Individual and community level risk factors were the most explored factors across the 20 studies. This is likely because more than half of the studies drew insights from surveys and interviews with at risk individuals, people in their social setting or service providers. This research design is more oriented towards capturing personal experiences and perceptions. In contrast, studies based on statistical analysis (Bales, 2011; Cho, 2015) had a greater emphasis on structural factors.

Only one study, Busza et al. (2017), analyzed protective factors which include knowledge (e.g., local language in destination country), skills (e.g., negotiating safety at work), interpersonal attitudes (e.g., confidence, assertiveness), and resources (e.g., mobile phone with local SIM and contact details of agency).

Few studies pointed out the interplay of risk and protective factors but did not analyze protective factors in sufficient detail to determine their influence on human trafficking vulnerability (see for example Hynes et al., 2018).

Table 8: Scope and type of vulnerability factors covered in reviewed studies

Studies that	Number of studies
focus on one country only (Ethiopia: 2 studies, Indonesia: 2 studies, Nepal: 2 studies, Romania: 1 study, Thailand: 1 study, Serbia: 1 study, U.S.: 2 studies)	11
focus on two countries	2
focus on multiple countries, region, or migration route	3
analyze factors globally	5
had a geographical focus including a country in Asia (excluding global studies)	6
focus on migrant workers	8
intentionally involved victims	3
focus on select risk factors (i.e. singular or select few factors)	7
aim to cover a comprehensive set of risk factors	14
determined individual level factors	13
determined household and family level factors	7
determined community level factors	12
determined structural level factors	8
analyzed risk factors only	20
analyzed risk and protective factors	1

Table 9 to Table 12 list the vulnerability factors analyzed in the reviewed studies across IOM's four levels. For studies that only analyze a select risk factor, the table does not list the various variables that make up the factor. The most referred to vulnerability factors across the 20 studies include

- gender / gender equality / gender-based social norms (eight studies),
- education (seven studies),
- employment status / employment or income opportunities (seven studies), and
- personal beliefs or aspirations (seven studies).

Table 9 to 12 serve to provide an overview of the different factor levels considered in the identified studies. It is important to note, that the vulnerability factors laid out in these tables are only valid within the context of the specific study and cannot be regarded as universally applicable.

Table 9: Vulnerability factors identified in qualitative survey-based studies

Focus group	Geography	Study	Individual factors	Household and family factors	Community factors	Structural factors
Human traf- ficking victims	Albania, Vietnam, Nigeria, UK	Hynes et al. (2018)	 Sex and gender Racial, ethnic, religious and/or linguistic identity Personal history Language skills Physical emotional and mental health Employment status Education and skills Beliefs about role in family & society Age Attitudes, beliefs & knowledge on migration Debt Socio-economic status Feeling of hopeless- ness 	 Socioeconomic status Social engagement Relationships with extended family members Practices related to birth Patterns of parent & child interactions Parental education level Parental disability or ill health Debt Employment and livelihoods Family history Family history Family size and household structure Gender roles and dynamics within the family Migration history 	 Social networks & engagement Position of individual & family within the society Membership within society Livelihoods & employment opportunities Availability of financial, education & health care services Community beliefs & practices Gender roles & dynamics in society Influence of religious & cultural authorities 	 Rule of law & law enforcement practices Respect for human & other rights Prevalence of criminality, organized crime & corruption Political systems Governance History of colonization Major economic activities Migration management practices
	Indonesia	Kleden and Atti (2019)	 Early marriage The desire to get rich quick Employment status Education 	(No such factors identified)	 Income opportunities Lack of access to information Poverty 	(No such factors iden- tified)
Migrants	U.S.	Deckert, Warren, and Britton (2018)	 Documents withheld by trafficker Gender: Being a woman History of trauma or abuse Lack of Supervision: Minors left without adult supervision Lack of under- standing of English language and/or American culture Being physically, cul- turally, or linguistically removed from social supports or networks 	 Employment or income precarity: Income with- held by intimate partner or trafficker, or access denied 	 English-only services: Not enough multilin- gual service providers and/or access to interpreters Housing instability due to legal status, financial resources, or because it is provided by employer 	 Immigration Status: Whether the migrant has legal status to be in the United States
Returnee migrant workers (3)	Ethiopia	Busza et al. (2017)	 Risk avoidance factors including Knowledge: Basic Arabic, cultural ex- pectations (clothing, gender relations), personal hygiene (using and disposing sanitary pads) Skills: Use of modern appliances and domestic products, negotiating safety at work (e.g., bedroom locks) Interpersonal atti- tudes such as confi- dence, assertiveness, obedience Resources: Phones and local SIM cards, contact details of agency / local Ethio- pians, family, leaving copy of contract with family 	(No such factors identified)		

Focus group	Geography	Study	Individual factors	Household and family factors	Community factors	Structural factors
Returnee migrant workers (3)	Ethiopia	IOM (2021b)	 Lack of risk minimiz- ing behavior due to fatalist beliefs Risk seeking behavior 	 Gendered norms relating to familial obligations 	 Gender-segregated labor market Cultural frameworks and conservative gender norms defines boys' and girls' access to education, the degree of household responsibilities, and their vulnerability to gender-based violence; all of which impact their later eco- nomic and broader life opportunities Kafala labour migrant sponsorship system 	 Limited formal employment opportunities for males due to underdeveloped private sector and high youth population Lack of regular migration pathways Lack of access to social and legal protection Political instability and ethnic discrimination limit employment prospects
	Indonesia	IOM (2021a)	Normalization of violence in migration experience	(No such factors identified)	 Gender-based social norms e.g., value of women's work, ex- pectations of women related to family debt and mariage, system- ic disempowerment of women, women's place is limited to the domestic sphere Social stigmatization (impacts returnee migrants' experiences and their disconnect from support services) Systemic disempow- erment of women (women are actively conditioned and en- couraged to put the needs of others first, and to be passive, obedient followers of their husbands and other male members of their community) Patriarchal struc- tures that sustain unequal patterns of decision-making (i.e., various actors exert control over a woman's migration choices) Women migrant workers' reliance on labor intermediaries and brokers, who are deemed as heroes and warriors Incomplete narrative of migration as posi- tive and aspirational Lack of credible information on safe migration (e.g. submissive behavior is advised to increase positive migration experiences) 	Weaknesses in gover- nance structures e.g., lack of formal identity documents, limited interventions for returnee migrants
Rejected asylum seekers and irregular migrants	Nigeria and Norway	Pasche et al. (2018)	(No such factors identified	j)		 Flaws in implemen- tation of return programs for rejected asylum seekers and irregular migrants

Focus group	Geography	Study	Individual factors	Household and family factors	Community factors	Structural factors
Children	Nepal	Adhikari and Turton (2020)	 Gender Cast Ethnicity Being a child of migrants Aspiration of better lives and low aware- ness of risks and consequences of migration Lack of skills and ed- ucation to access and process information about migration Lack of formal educa- tion and failure to ac- quire adequate skills leads to acceptance of jobs in informal sectors Gender related drop out in high schools 	(No such factors identified)	• Acceptance of child labor and child marriage	• Historically lax approach to birth reg- istration due to lack of awareness of the importance of birth registrations
	Romania	Pascoal and Schwartz (2018)	 Lack of parental contact and affection (opportunity for traf- fickers to exploit the lack of affection) Child's feeling of abandonment 	(No such factors identified)	 Child's marginaliza- tion within society 	(No such factors iden- tified)
Stateless hill tribe people	Thailand	Thailand Rijken et al. (2015)	human trafficking. In doin	velop a research methodolog g so the study applied a varie e hill tribe people in Thailanc	ety of research methods to i	dentify the consequences
			 Lack of education Lack of proper ID docs Adventurous and/or risk seeking behavior Materialism Crisis or situation of conflict (e.g., acute need for medical treatment and related financial means) 	 Family responsibility Poverty 	 Lack of employment opportunities Lack of respect/dis- crimination Lack of access to education Lack of access to health care/ acute need of medical treatment 	 Statelessness (which limits options for em- ployment, education, etc.) Lack of protection (Police) corruption
People residing in a specific district, village,	Ethiopia, Saudi Arabia	Kiros and Zeru (2020)	(No such factors iden- tified)	(No such factors identified)	 Socio-economic insecurity caused by unemployment, poverty 	 Socio-economic insecurity caused by environmental degra- dation, landlessness, and population growth
or com- munity	Nepal	Mo (2017)	 Risk seeking behavior induced by perceived relative deprivation 	(No such factors identified)		
Individu- als within the social welfare system	U.S.	Schwartz et al. (2019)	 Housing insecurity: homelessness, running away from home, movement within foster care system, trading sex for housing Educational gaps: lack of positive educational experiences, lack of mentors English language limitations Sexual abuse during migration 	Economic insecurity: poverty, unemploy- ment/underemploy- ment	 Undocumented status Isolation of migrant population and of non-Spanish-speak- ing migrants within the larger migrant community 	(No such factors iden- tified)

Table 10: Vulnerability factors identified in quantitative survey-based studies

Focus group	Geography	Study	Individual factors	Household and family factors	Community factors	Structural factors
Migrants aged 14 years or older	Mediterra- nean migra- tion route to Italy	Bartoli- ni and Zakos- ka-Todor- ovska (2020)	 Gender: Being male Children and young adults below 25 years Being from West Af- rica, East and Horn of Africa and Southeast Asia Being widowed or divorced Travelling alone or with non-family group Not having a family member at destination Having passed through Libya Having spent one year or more in a country different from origin Longer periods in transit Having arrived/being interviewed more recently 	(No such factors identified)		
	Central and Eastern Mediterra- nean migra- tion route to Italy and Greece	Galos et al. (2017)	 Gender: Being male Travelling alone High cost of the journey (over USD 5,000) No close family in the country of destination Longer time spent in transit No education, primary or tertiary education Secondary migrant (departing from a country different from that or origin) Travelling along the Central Mediterranean Route 	(No such factors identified)		

Table 11: Vulnerability factors identified identified in qualitative studies based on review of case files

Focus group	Geogra- phy	Study	Individual factors	Household and family factors	Community factors	Structural factors
Human traf- ficking victims	Global	UNODC (2020b)	 Economic need Immigration status Mental, behavioral, or neurological disorder Limited education or knowledge of foreign language Physical disability 	 Child with a dys- functional family Child deprived of parental care 	(No such factors ident	fied)
Mi- grants, refugees (1)	Serbia	Brun- ovskis and Surtees (2017)	 Lack of knowledge about rights and assistance (in- cluding not understanding protection options, options for legal stay/work and available services) Threats to personal safety (including physical, sexual and mental well-being) Language barriers and an inability to communicate with authorities along the route Lack of resources (e.g., for basic needs and survival, to continue the journey/flight) 	• Exposure to violence family or community	and abuse within the	 Lack of legal status (including a lack of identity documents) Inadequacy or lack of humanitarian aid for some categories of migrants/refugees

Table 12: Vulnerability factors identified in statistical analysis based studies

Focus group	Geography	Study	Individual factors	Household and family factors	Community factors	Structural factors
	Global	Walk Free Foun- dation (2018) The Global Slavery Index 2018	 Ability to borrow money Ability to obtain funds Undernourishment 	(No such indicators identified)	 Access to clean water Acceptance of immi- grants Acceptance of mi- norities Cell phone users Social safety net Tuberculosis Violent crime 	 Confidence in judicial systems Disabled Rights GINI coefficient GSI Government Response Impact of terrorism Internal conflicts fought Internally displaced persons Political Instability Political Rights Regulatory Quality Same sex rights Weapons Access Women's Physical Security
		Bales (2011)	Perceived lack of opportunity	(No such factors identified)	 Governmental corruption The country's infant mortality rate Proportion of the population below the age of 14 The country's food production index The country's population density Conflict and social unrest
		Cho (2015)	Higher levels of gen- der equality (in origin country)	((No such factors identified	(k	Income levelCrime prevalenceLaw enforcement
Disaster affected popula- tions (1)	Global	Gurung and Clark (2018)	defined to include "force Study results indicate the ters, which the author in The study analyzes the in populations and finds th	mate the effects of disaster of ed prostitution, forced labor at prostitution-based exploit terprets to point toward an a nfluence of select factors on lat these factors may either i further explored in section 5	; forced child prostitution a tation appears more likely acute vulnerability faced b human trafficking risks wit ncrease or reduce the risk	and forced child labor". in the aftermath of disas- y women and children. hin disaster affected



5. KEY CONSIDERATIONS FOR MEASURING VULNERABILITY TO HUMAN TRAFFICKING

In the following we present key considerations when measuring vulnerability to human trafficking. These are gleaned from the research of the 21 studies itself and from our observation across the body of research. Ind may help us to understand factors that determine or influence an individual's vulnerability to human trafficking:

5.1 The socio-cultural context influences how factors play out

Vulnerability factors cannot be taken out of the specific socio-cultural context.

This becomes most evident when we review insights from studies on the linkage between gender and human trafficking vulnerability. Several of the reviewed studies either identified men or women to be at higher risk of trafficking. This can be explained by the diversity of gender norms and socio-cultural expectations across cultures and religions and how they influence the individual experiences of women and men (or girls and boys). It follows, therefore, that either gender's exposure to human trafficking risks needs to also be contextualized in this way.

As an example, Hynes et al. (2018), show in their study that "harmful social norms and practices exist and in-

tersect with human trafficking, often in a gender-specific way". These harmful norms and practices "included examples of conservative gender norms, such as early and forced marriage or limited access to education or livelihood opportunities for women and girls. In these circumstances, women and girls may seek to avoid or resist these vulnerabilities by seeking opportunities to leave their household or community settings, increasing the risk of accepting offers from people offering to facilitate this process".

Another study that shows how the socio-cultural context can influence human trafficking risks is provided by Cho (2015) who aimed to identify robust push and pull factors of human trafficking across 154 countries. Regarding gender as a risk factor, the author finds, that a high level of gender inequality and underdevelopment may reduce human trafficking by constraining human mobility. This finding adds another layer to those by Hynes et al. (2018) and highlights the complexity of how risk factors may play out in a given socio-cultural context.

Research findings by IOM, 2021b, in Ethiopia corroborate that "the overarching gender norms and sociocultural landscape in Ethiopia impact roles, behaviors, expectations and relations; resulting in crucial differences between the drivers, risks, opportunities and experiences of male and female migrants". A similar study by IOM, 2021a, in Indonesia, finds that gender-based social norms "are critical to understanding migration choices and outcomes" (IOM, 2021a). An added layer of complexity is that structural factors, such as legal status, can themselves impact gender-based social norms.

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As an example, the study by IOM, 2021b, found that in Ethiopia there are more opportunities for females to migrate for work to Gulf countries through regular migration pathways than for males. Having to rely on irregular routes overland, men are at higher risk of abuse and extortion during the migration journey. Upon arrival in the destination country, however, the risk profile changes. With women more likely to be employed as domestic workers they are placed in settings with inadequate oversight and enforcement of legal regulations. Men were more likely to work in a public setting outdoors with better opportunities to escape from abusive employers.

Working in the informal sector without work permits, however, makes male migrants more vulnerable to arrest, imprisonment, and deportation. IOM, 2021b, thus finds that the highly gender-segregated labor market leads to different experiences and types of risks for female and male migrants at different points in time.

There are also other socio-cultural aspects such as those specific to a certain community that can contribute towards human trafficking vulnerability. Hynes et al. (2018) point to community beliefs and practices such as the belief system of juju or oath-taking within communities in Nigeria that can contribute as a means of a person being trafficked and as a means of keeping them in a situation of exploitation. Adhikari and Turton (2020) point out the wide acceptance of child labor and child marriage in some ethnic communities in Nepal as a contributing factor to human trafficking vulnerabilities of children. In other contexts, these factors may not be relevant.

In addition, risk-factors do not appear to be the same across different type of trafficking. One study, Gurung and Clark (2018), focused on analyzing the risk of internal human trafficking after a natural disaster at a global level. Within this context, the study analyzed the strength of few select risk factors with regards to four different types of internal trafficking which were specified as "forced prostitution, forced labor, forced child prostitution and forced child labor". Interestingly, the study finds "diametrically opposing" effects of criminalization and enforcement of trafficking law. Gurung and Clark (2018) state that "enforcement appears to deter the likelihood of internal trafficking, anti-trafficking legislation seems to facilitate internal trafficking" (p.313-314).

They further find, that "democracy appears to deter the likelihood of labor-related trafficking but facilitate prostitution-based trafficking" as "an overall liberal ideology" within a country can have a positive influence on prostitution-based trafficking while the democracy linked respect for human rights can have a negative influence on labor trafficking (Gurung and Clark, 2018, p.314).

5.2 Choice and autonomy in the decision-making process is key but hard to capture

Seven studies analyzed vulnerability factors related to an individual's personal aspirations that can lead to a higher level of risk tolerance (Adhikari and Turton, 2020; Bales, 2011; Hynes et al., 2018; IOM, 2021b; Kleden and Atti, 2019; Mo, 2017; and Rijken et al., 2015).

These studies show that the desire to improve one's standard of living and socio-economic status can outweigh the risk of trafficking. The acceptance of risk can also be driven by fatalist beliefs. IOM (2021b) finds that cultural and religious beliefs about "luck" and the "will of God" deciding one's destiny has resulted in young people not preparing themselves adequately with information or resources to mitigate or minimize the risks of migration. Similarly, Hynes et al. (2018) finds that "cultural and religious beliefs about how luck and divine power can provide protection appear to influence attitudes towards risk and willingness to embark on journeys".

Adhikari and Turton (2020) note that "trafficking has become a far more complex phenomenon than that of the dominant discourse which is built on assuming that victims are innocent and uneducated actors" (p.401). Researchers should be careful not to assume that victims are simply responding to their environment without willful choice.

Drawing on these studies we find that it is important to consider an individual's autonomous decision-making process in order to understand why some individuals are at higher risk than others and in order to design the most effective interventions. An attempt to categorize individuals into groups that meet similar vulnerabilities disregards the lived experiences, personal beliefs and aspirations that influence the individual decision-making process.

5.3 Vulnerability factors come together in complex constellations

We find that none of the 21 reviewed studies by themselves provide a complete and clear picture of factors influencing an individual's vulnerability to human trafficking. We argue that given the complexity of personal experiences, attitudes, and decision-making processes and how individuals are integrated into their families, communities, societies, and broader socio-economic context, there can be no single cause of vulnerability and no universally valid list of vulnerability factors. It is important to acknowledge the complex constellation of multiple contributing factors across different levels that lead to an individual's vulnerability in order to accurately identify and measure that vulnerability. This argument is emphasized in the IOM DoMV model and in several of the reviewed studies.

As an example, having analyzed the human trafficking vulnerability of children in Nepal, Adhikari and Turton (2020) argue that "children tend to have varied experiences of childhood, which is in contrast to the dominant discourse of UNCRC [UN Convention on the Rights of the Child]". The authors emphasize that numerous factors, including education, ethnicity, caste, and culture "intersect and reinforce children's vulnerabilities".

Hynes et al. (2018) find that:

"sex and gender as a factor of vulnerability is greatly determined by a multitude of external factors across the household and family level, community level and the structural level in the country of origin and destination countries" (p.43).

Based on data from a case study of service providers working with at-risk populations in Kansas City in the U.S., Schwartz et al. (2019) find that the identified risk factors are not a form of predestination but rather add to the systemic risk faced by individual (i.e., not every person in poverty faces the risk of trafficking). They stress that "not one factor that can be isolated as the root cause of trafficking; rather, it is the complex connection of factors that perpetuate exploitation." This argument is also supported by Brunovskis and Surtees (2017) who find that the risk factors of human trafficking for migrants along the Balkan route "do not automatically signal or necessarily lead to human trafficking" and that "there are situations in which the interplay of these vulnerabilities may translate into different forms of trafficking at some stage of the journey".

Rijken et al. (2015) analyzed the nexus between statelessness and human trafficking in Thailand, and emphasizes the importance of crisis or sudden dramatic events that trigger an urgent need for money (e.g., need for expensive medical treatment for a family member, the loss of or imprisonment of the breadwinner, divorce). They find that:

> "when such a crisis occurs, the prevalence of root causes makes a person less able to deal with or absorb the situation and make dormant root causes become real risks, potentially 'triggering' trafficking. The three categories of

root causes (external factors, internal factors, and triggers) in and of themselves, and in isolation from the other categories, do not necessarily provide for an increased risk for exploitation or human trafficking. It is a combination of the prevalence of risk factors in all three categories that mutually re-influence one another and generate a toxic mix of circumstances in which vulnerability for exploitation and human trafficking increases" (p. 102).

This is also supported by Schwartz et al. (2019) who argue for a chains-of-risk model to make meaning of the connections of trafficking risk factors. Their model frames human trafficking as part of a larger continuum of violence, vulnerability, and exploitation where individuals may find their risk of trafficking increasing as the number of adverse life events and factors accumulate over time. As an example, the authors refer to financial instability created by unemployment and poverty, which may increase the risks people take in looking for income and add to the likelihood of experiencing exploitation.

The above studies emphasize the argument that vulnerability is the result of the accumulation of adverse risk factors that can be overlapping or interconnected. Vulnerability to human trafficking also changes according to an individual's unique context (e.g., social, cultural, economic, and political) and the willingness to take risks.

5.4 Vulnerability is a result of risk and resilience

Risk factors alone do not equate to vulnerability predictors. As emphasized in previous sections, vulnerability is the result of the complex interplay of varied risk and resilience factors. Within the scope of our literature review we only identified one study that analyzed proactive factors that help avoid the risk of human trafficking.

Based on in-depth interviews and focus group discussions with a total of 35 female returnees in Ethiopia, Busza et al. (2017) set out to require evidence about local risk and protective factors. The study finds that protective factors related to knowledge, skills, access to resources (e.g., phone and local SIM card), and interpersonal attitudes (e.g., assertiveness) can foster better decision-making and preparation and thus safer migration. The authors emphasize that

"incorporating robust findings about people's knowledge, important skill sets and how they behaved with employers into safe migration interventions is likely to foster better pre-departure decision-making and preparation" (p.8).



6. MAJOR GAPS IN THE RESEARCH

With these considerations in mind, our review of the literature points to a number of gaps that mean that much of the research may be ignoring large parts of the story around trafficking. These missing pieces of research may limit its usefulness in regard to identifying and protecting vulnerable individuals and groups, or at very least, mean that they can only form a part of the picture when developing interventions. In the following we present important aspects of human trafficking that the reviewed studies have failed to explore in sufficient detail.

6.1 Lack of research on protective factors and resilience

The IOM DoMV model emphasizes that vulnerability is the result of an overall preponderance of risk factors, coupled with inadequate protective factors. There is an obvious lack of studies on factors that can improve capabilities to avoid human trafficking. Given that many vulnerabilities are difficult to overcome, for example, poverty, or firmly embedded within social norms, for example, gender roles, tackling trafficking may be more productive if we could better understand sources of resilience and ways in which individuals and communities could protect themselves from vulnerability to trafficking.

We might see vulnerability as a combination of two elements: "an external side of risks, stresses, shocks and structural factors faced by individuals; and an internal side associated with individual defenselessness, lack of means to cope and lack of skills" (Chambers, 1989).

Busza et al. (2017) was the only study identified within the scope of our literature review that aimed to develop evidence-based recommendations on how to improve migration safety to inform the development of a human trafficking intervention program for prospective migrants. According to Busza et al. (2017) the lack of evidence on which factors can foster safer migration stands in stark contrast to the increase in pre-migration interventions. Thus, a better understanding of protective factors could lead to interventions that can give individuals and communities the capacity to avoid trafficking.

6.2 Little consideration of the role of traffickers and the demand for forced labor

Four studies in our review considered the influence of traffickers. Gurung and Clark (2018) define trafficking as "a function of individual vulnerability and subsequent criminal agency" (p.306) and the UNODC 2020 Global Trafficking in Persons Report explores this point more. However, the influence of traffickers and the demand for forced labor is not touched upon in most of these papers. Yet, in the absence of traffickers there will be no trafficking. We know that some trafficking might be related to organized crime linked to a network of bribery and corruption of officials. Yet, it is also likely that some trafficking is opportunistic and less well organized. We are unable to determine the balance between the two based on this research review. Nor are we able to design interventions to stop traffickers if we have limited understanding of how they operate.

There is also the question of demand for forced labor and trafficked persons. Again, if there were no demand from people wanting to find cheap labor in abusive situations, there would be less trafficking. This side of the equation seems to be little researched.

One of the few studies that explored the perspective and influence of traffickers is IOM (2021a). Focusing on migration, the study finds that labor intermediaries such as recruiters and brokers are seen as "heroes and warriors" that are "well regarded in the community and relied upon by aspiring migrants". The study explains further that there is a power imbalance created by the intermediaries' higher economic standing, and the paternalistic role they play can be disempowering for potential migrants. Notably, IOM (2021a) states that intermediaries

> "set the tone for the workers' employment experience by providing potential migrants with information on job scope and remuneration terms, providing documentation necessary for travel and telling their clients how to behave once they arrive in countries of destination" (p.20).

The study adds that the dynamic is "influenced by a gendered element, given that most brokers are men, and the migrant workers are women" (IOM, 2021a, p.20).

Pascoal and Schwartz (2018) find that "traffickers tend to be very aware of the emotional and material needs of vulnerable girls who come from disruptive families whether they are living in shelters or not, or whether they are left-behind children or not" (p.52). They also refer to the risk of traffickers recruiting vulnerable girls to gain access to other girls.

We should note that the findings of our literature review imply that there is a lack of research on how traffickers are able to exert influence on vulnerable individuals. However, a more targeted literature search with a crime lens might likely arrive at a different conclusion.

6.3 Need for evidence-based empirical research complemented with structural level analysis

Within the scope of our literature review, we found four approaches to determining factors that influence an individual's vulnerability to human trafficking .e., qualitative survey-based studies, quantitative survey-based studies, qualitative studies based on review of case files, quantitative studies based on statistical analysis. Each approach comes with its own advantages and limitations.

Qualitative studies based on surveys and interviews capture the lived experiences and perceptions of individuals and thus provide valuable insights into individual, household/family, and community level vulnerability factors. They often allow for more indepth explorations and conversations of vulnerability factors. However, these studies often lack consideration of complex and systemic structural factors (e.g., the influence of migration policies and governance) if interviewees are not able to fully describe them due to lack of knowledge or awareness of their relevance. Researchers do not seem to go on to test findings of qualitative research, completed on limited sample sizes, using quantitative methods. This seems to limit the robustness of their conclusions.

Studies based on statistical analysis tend to start with a large set of possible vulnerability factors. Depending on how the initial list of vulnerability factors has been created, they might lack insights on individual, household/family and community level. They tend to focus more on structural factors. As they pool data from a large set of countries, they also lack reflection of the geographical and socio-economic context within which human trafficking occurs. Essentially, the models are often built upon untested assumptions.

To overcome shortcomings of the different measurement approaches, there is a need for a combination of methodological approaches with more studies being replicated in different contexts. When micro-level surveys are complemented with political economy analysis in locations of origin of victims and destination countries, a more complete picture of vulnerability factors for a given geographical and socio-economic context can be presented. In addition, these four methodologies seem to mainly be carried out in isolation, rather than building upon each other in steps or phases, which might strengthen statements made.

Micro-level qualitative surveys and interviews can provide a more nuanced understanding of vulnerability factors at the individual, family & household, and community level based on the lived experiences, beliefs, aspirations, and insights of victims, at-risk individuals, and their social network. However, quantitative political economy analysis is needed to capture the influence of historical, political, economic and structural factors which may be more complex and systemic and not be understood or recognized by individuals.

6.4 Need for testing validity of factors and value of vulnerability measurements

Within the scope of our literature review we have identified studies that determined vulnerability factors to human trafficking. If done correctly, these studies can provide robust evidence about vulnerability factors critical for informing the theory of protection and intervention programs on the ground.

There is value in additional research to understand if any of these studies tested their vulnerability theories for validity by applying them to actual programs or testing or "ground-truthing" theoretical findings in real life situations.

Only one study, Busza et al. (2017), determined vulnerability factors with the aim to inform a specific program that sought to foster better decision-making and preparation for safer migration. A critical next step would be an evaluation of the implemented program to test the practicability of applying the vulnerability factors for the development of the program theory and any value for program effectiveness.

The Global Slavery Index (Walk Free Foundation, 2018) includes an assessment of government action in response to modern slavery based on progress made towards five milestones relating to identification, protection, prevention and risk factors. These include victim identification and support, preventative criminal justice mechanisms, inter-regional coordination, the addressing of risk factors, and the prevention of sourcing goods or services that involve forced labor. It highlights in its methodological limitations that while NGO verification is a key step in measuring the extent to which governments are responding, "more remains to be done in getting at the reality of what is occurring on the ground". It does not make clear if it has identified action on the ground as being a response to the GSI ratings or other research into vulnerability.

6.5 Lack of critical discussion of dominant vulnerability narratives

At first sight we seem to understand what we mean by the term vulnerability. But when we consider how the term "vulnerability" is used, it is clear that the assumed understandings often conceal a variety of uses with multiple conceptual dimensions (Brown et al., 2017). Brown et al. (2017) note that "the vagueness and malleability of vulnerability can result in a problematic lack of analytic clarity which in turn can have important implications for interventions and practices" (Brown et al, 2017, p.498). Indeed, the use of the concept of vulnerability is often linked to different social, political, economic and cultural conditions and associated with an undefined standard of behavior, situation or way of life. Thus, the concept of vulnerability is very variable, has both situational and spatial elements and includes recognized or unrecognized assumptions of what characterizes vulnerability and the root causes of vulnerability.

The studies reviewed for this literature review help gain some ground on providing greater analytic clarity by determining context-specific vulnerability factors. Several studies, however, might have drawn on "assumed understandings" of vulnerability and thus reproduced dominant vulnerability narratives. As an example, the statistical analysis-based studies reviewed for the purpose of this report, begin with a pre-defined list of vulnerability factors and deploy statistical models to analyze the strength of individual factors. In doing so they mostly draw vulnerability factors from literature review. This approach seems to validate only pre-existing conceptions about vulnerability and fails to establish context-specific causality of vulnerability variables. Empirical qualitative interview and survey-based studies appear to be better able to capture the complex and ambiguous nature of vulnerability and provide the level of analytical clarity needed to inform interventions.

As Brown et al. (2017) point out "The use of the term vulnerability is often normative, implying deviation from undefined social norms, standards of life or deviant behaviors" (p.498). Again, such fluidity in its definition makes vulnerability difficult to package into some sort of measurement framework. Thus, looking for one single, all embracing definition of vulnerability may be neither possible nor desirable. Before we can measure vulnerability therefore, we might argue that there is a need to get a clearer grasp of the many facets of vulnerability and the context of the use of the term. Rather than having one measure of vulnerability we may need to think about the forms and situations in which the term is used.

It is also important to recognize that in the short-term vulnerability is difficult to change. For example, poverty, structural factors, inequalities and gender norms will not be overcome quickly. This begs the question, as to whether vulnerability is it the right focus for interventions? As discussed above, vulnerability is a mix of risk and resilience, and it stands to reason that interventions should also address both.



7. RECOMMENDATIONS

In answering the second of our research questions, we have a number of conclusions on the use of existing research in informing interventions to protect vulnerable individuals and groups. This literature review concludes that in order to develop useful vulnerability measurement methods to inform protection interventions for at risk individuals and groups, the following key recommendations need to be taken into account:

Recommendation 1: The complex interplay of vulnerability factors must be accounted for when using research to design interventions

Using the existing research and measures to inform interventions will only be useful in the specific context of the research. If interventions are to be based on academic research, the geographical, socio-economic, or community context must match. Findings and measures developed in existing research cannot be translated into a universally applicable list of vulnerability variables.

Research can only be useful for the design of effective interventions if they form part, not all, of the intervention foundation. An attempt to categorize individuals into groups that meet similar vulnerabilities disregards the lived experiences, personal beliefs and aspirations that influence the individual decision-making process. Such an attempt may fail to identify potential victims (i.e., those driven by strong aspiration to improve their socio-economic situation and willing to accept the risks) or misallocate resources into ill-informed interventions.

It is also important to note, that the complexity of an individual's vulnerability cannot be captured in its entirety in measuremexqnt approaches that seek to determine vulnerability factors applicable to a group of individuals. Limitations of vulnerability measurements need to be accepted and accounted for when informing interventions.

Recommendation 2: Research must merge risk and resilience factors to better inform interventions

The need to not only mitigate vulnerabilities but also strengthen protective factors means that interventions must be designed to incorporate improving resilience. Too much research has concentrated on sources and measures of vulnerability without adequately considering the resilience of individuals and communities. More research into these resilience factors is needed so as to design interventions and tools that are able to overcome vulnerability and reduce the likelihood of trafficking.

Recommendation 3: Research must not ignore the topic of autonomy and traffickers

Our literature review has found key shortcomings of the reviewed vulnerability measurement approaches including the lack of consideration of an individual's choice and autonomy in the decision-making process and of the influence of traffickers. To better inform interventions, research must acknowledge the influence that these have on how vulnerable an individual becomes.

Recommendation 4: Promote mixed method approaches with validated results

To overcome shortcomings of the different measurement approaches, there is a need for a combination of methodological approaches. When micro-level surveys are complemented with political economy analysis, a more complete picture of vulnerability for a given geographical and socio-economic context is possible. To test the validity of vulnerability factors and their value for informing interventions, there is also a need to evaluate the effectiveness of interventions and the strength of the underlying program theory. In this social and cultural context, testing theories on the ground and evaluating their truthfulness in real life communities would be considered very useful. In addition, it would be relevant to explore if cultural, community level knowledge is more effective at identifying vulnerable individuals and how to protect them.

Recommendation 5: Develop guiding principles for vulnerability measurements

In some research, it was felt that vulnerability is pre-defined and then research evidence collected to validate this, in addition, judgment can be clouded due to ingrained biases and assumptions of researchers and those implementing interventions. Research must acknowledge and attempt to mitigate this to improve the usefulness of its measurements and conclusions.

Developing guiding principles for vulnerability measurements that consolidate findings from relevant quality research will help ensure that global learnings are captured and applied and that future vulnerability measurements are informed by academically sound methods and best practices.

Recommendation 6: Create a collaborative database of relevant research on vulnerability, accessible to practitioners

Both research and interventions can usually only work at one or two risk levels. That is, interventions carried out by an NGO at the grassroots level, can only be expected to address individual or community level risk factors.

This literature review will be followed by a stakeholder engagement exercise which will seek feedback from lead learners in the space of human trafficking and NGOs involved in working closing with at risk individuals and human trafficking survivors on the findings of this review. The stakeholder engagement will seek to understand how vulnerability is understood and measured on the ground, the extent to which program design and interventions are data or research informed and what kind of research or data may be most helpful. The stakeholder engagement will be carried out in a case study environment, focusing on trafficking within Cambodia and across the Thai border.

8. APPENDICES

Appendix I: Research strings

In Phase 1 of the search Boolean searches were conducted using the search terms in the table below. The terms in the table are divided into their categories. Up to three terms were used in each Boolean search.

Trafficking terms	Measurement terms	Labor terms
Human trafficking^	Assessment [^]	Labor
Individuals	Identify^	Skilled
Intervention	Indicator [^]	Unskilled
Persons	Measure [^]	Worker
Trafficking	$Measurement^{\wedge}$	
Vulnerability^	Reduce	
Vulnerable^	Reduction	

^Terms included in Phase 2 of the search which used Google Scholar and Google focused more narrowly on search terms related to measuring vulnerability to trafficking.

Appendix 2: List of relevant studies identified through literature review

#	Qualitative surveys / interviews	Details
1	Adhikari and Turton (2020)	Geography: Nepal Group focused on: Children Scope of factors analyzed: Multiple risk factors Factor level: Individual, community Intentional involvement of victims in surveys: No Sampling size: 60
2	Busza et al. (2017)	Geography: Ethiopia Group focused on: Returnee domestic workers Scope of factors analyzed: Protective factors (risk avoidance factors) Factor level: Individual, community Intentional involvement of victims in surveys: No Sampling size: in-depth interviews with 12 women and focus group discussions with 23 women
3	Deckert, Warren, and Britton (2018)	Geography: U.S. Group focused on: Migrants Scope of factors analyzed: Multiple risk factors Factor level: Individual, community 4Intentional involvement of victims in surveys: No Sampling size: 16
4	Hynes et al. (2018)	Geography: Albania, Vietnam, Nigeria, UK Group focused on: Human trafficking victims Scope of factors analyzed: Multiple risk factors Factor level: Individual, household, community, structural Intentional involvement of victims in surveys: Yes Sampling size: 96 key informants and 68 human trafficking victims
5	IOM (2021a)	Geography: Indonesia Group focused on: Returned female migrants Scope of factors analyzed: Select risk factors (i.e., gender norms and stigma) Factor level: Household, community, structural Intentional involvement of victims in surveys: No Sampling size: 48
6	IOM (2021b)	Geography: Ethiopia Group focused on: Returned female migrants Scope of factors analyzed: Select risk factors (i.e. gender norms and stigma) Factor level: Household, community Intentional involvement of victims in surveys: Yes Sampling size: 67
7	Kiros and Zeru (2020)	Geography: Ethiopia, Saudi Arabia Group focused on: District community Scope of factors analyzed: Multiple risk factors Factor level: Individual, household, community, structural Intentional involvement of victims in surveys: Yes Sampling size: 41
8	Kleden and Atti (2019)	Geography: Indonesia Group focused on: Human trafficking victims Scope of factors analyzed: Multiple risk factors Factor level: Individual, household, community Intentional involvement of victims in surveys: Yes Sampling size: 49
9	Mo (2017)	Geography: Nepal Group focused on: Adult villagers Scope of factors analyzed: Select risk factors (i.e., perceptions of relative deprivation) Factor level: Individual Intentional involvement of victims in surveys: No Sampling size: 719
10	Pasche et al. (2018)	Geography: Norway and Nigeria Group focused on: Rejected asylum seekers and irregular migrants Scope of factors analyzed: Select risk factor (i.e., implementation of return program) Factor level: structural Intentional involvement of victims in surveys: Yes Sampling size: 60

11	Pascoal and Schwartz (2018)	Geography: Romania Group focused on: Left behind children Scope of factors analyzed: Select risk factors (e.g., lack of parental presence) Factor level: Individual, household Intentional involvement of victims in surveys: No Sampling size: 21
12	Rijken et al. (2015)	Geography: Thailand Group focused on: Stateless hill tribe people Scope of factors analyzed: Select risk factors (i.e., statelessness) Factor level: Individual, structural Intentional involvement of victims in surveys: No Sampling size: 30
13	Schwartz et al. (2019)	Geography: U.S. Group focused on: Individuals within the social welfare system Scope of factors analyzed: Multiple risk factors Factor level: Community Intentional involvement of victims in surveys: No Sampling size: 42
#	Quantitative surveys	Details
1.	Bartolini and Za- koska-Todorovska (2020)	Geography: Mediterranean migration route to Italy Group focused on: Migrants aged 14 years or older Scope of factors analyzed: Multiple risk factors Factor level: Individual, community Intentional involvement of victims in surveys: No Sampling size: 12,000
2.	Galos et al. (2017)	Geography: Central and Eastern Mediterranean migration route to Italy and Greece Group focused on: Migrants aged 14 years or older Scope of factors analyzed: Multiple risk factors Factor level: Individual, community Intentional involvement of victims in surveys: No Sampling size: 16,524
#	Analysis of case files	Details
#		Details Geography: Serbia Group focused on: Migrants, refugees Scope of factors analyzed: Multiple risk factors Factor level: Individual, structural (e.g., migration policies) Intentional involvement of victims in surveys: Yes Sampling size: 32
	case files Brunovskis and	Geography: Serbia Group focused on: Migrants, refugees Scope of factors analyzed: Multiple risk factors Factor level: Individual, structural (e.g., migration policies) Intentional involvement of victims in surveys: Yes
1.	case files Brunovskis and Surtees (2017)	Geography: Serbia Group focused on: Migrants, refugees Scope of factors analyzed: Multiple risk factors Factor level: Individual, structural (e.g., migration policies) Intentional involvement of victims in surveys: Yes Sampling size: 32 Geography: Global Group focused on: Human trafficking victims Scope of factors analyzed: Multiple risk factors Factor level: Individual, household/family Intentional involvement of victims in surveys: Yes

2.	Cho (2015)	Geography: Global (153 countries) Group focused on/context: No specific group Scope of factors analyzed: Push and pull factors Factor level: Community, structural Methodology details: The study drew a list of 70 (potential) push factors in countries of origin, and 63 (potential) pull factors in countries of destination from 19 empirical studies identified through literature review. To check the statistical significance of the effect of a factor, the author performed an extreme bound analysis, running more than two million regressions with all possible combinations of variables for up to 153 countries during the period of 1995–2010. In performing the extreme bound analysis, the author uses three different human trafficking datasets. The UNODC, 2006, Global Report on Trafficking in Persons is used as the main mea- surement. Used for robustness check were the United States Department of State (2001–2014) Trafficking in Persons Report and the ILO, 2005, Database in Global Reports.
3.	Gurung and Clark (2018)	Geography: Global (158 countries) Group focused on/context: Disaster affected populations Scope of factors analyzed: Select risk factor (i.e., disaster severity and the influence of select structural factors on internal trafficking) Factor level: Structural Methodology details: Focuses on the impact of natural disasters on internal trafficking in 158 countries from 2001 to 2011. The authors apply generalized estimation equations with country-year as the unit of analysis: Internal trafficking = $\mathbf{a} + \boldsymbol{\beta} 1$ (Affected population) + controls + $\boldsymbol{\epsilon}$ Four dependent variables were applied, which capture the presence of four types of internal trafficking in country-year, i.e., forced prostitution, forced labor, child prostitution, and child labor. The outcome variables are coded "1" for the country witnessing internal trafficking in a given year, and "0" otherwise. The variables were obtained from Richard Frank's (2013) Human Trafficking Indicators (HTI) dataset which is compiled from the US State Department's annual TIP report. Affected population, the explanatory variable, was obtained from the Emergency Events Data- base (EM-DAT) of the Center for Research on the Epidemiology of Disasters (Guha-Sapir et al., 2014). The authors relied on past and recent trafficking-based scholarship to identify pertinent con- trol variables for their analysis and also introduce two variables to gauge government action against trafficking, i.e., trafficking legislation and trafficking enforcement.
4.	Bales (2011)	Geography: Global (all countries worldwide) Group focused on/context: No specific group Scope of factors analyzed: 76 push and pull factors Factor level: Structural Methodology details: The study built a list of 76 factors (referred to as human trafficking predictors) that were primarily sourced from the UN statistical handbook (other sources included World Statistics Pocketbook, United Nations, Sales No. E.95.XVII.7. New York: United Nations, 1995; The Inter- national Corruption Index assembled by Transparency International; 'Human Rights Abuses by Country' a table compiled by the Observer Newspaper, London, 25 October, 1999; Amnesty International, Amnesty International Report 1999, London, 2000; and the author's own data- base of slavery and trafficking). Factors were categorized into push factors and pull factors and reviewed by trafficking experts. To examine the relative strength of each of the factors the author applied a multiple regres- sion model which allows to examine a number of factors at the same time and calculates the independent effect of each of these factors on the dependent variable, which in this case is the amount of trafficking from a country and to a country.

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